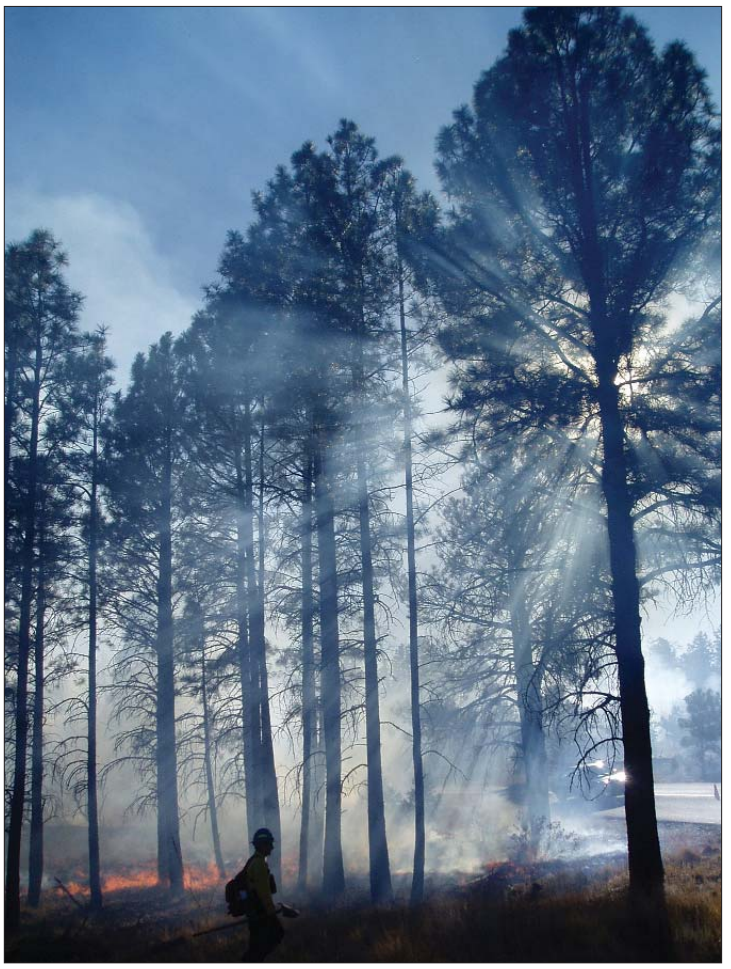
Bandelier National Monument Fire Management Program

Spring 2007 Edition



Prescribed Burn, NPS Photo

"Safety, efficiency, and effectiveness are always our priorities in Fire Management. That is why over the past several years Bandelier has utilized several different fire methods to accomplish some of its land management goals. Mechanical Thinning projects on the west and east sides of Forest Service Road 289 were completed with only piles on the west side remaining to be burned this year. Two fire-use fires ignited by lightning were managed to consume fuels while maintaining and restoring our natural systems. This past fall we used prescribed fire for the first time since the Cerro Grande fire in 2000. These approaches will continue to be utilized in 2007 when the conditions are appropriate. Read on in this newsletter for more information about the 2006 and 2007 fire management efforts in Bandelier. If you have any questions about the Bandelier fire program, give us a call."

Darlene Koontz, Superintendent of Bandelier National Monument

Thank you, Jonas Lane, for the fantastic drawing of firefighters in action! You're the winner of our First Annual Kid's Drawing Contest.

The temperatures are warming and the spring winds are beginning to blow. Television and newspaper reports bring news of this year's first wildfires in the state. As a town already familiar with the potential devastating impacts of wildfire, Los Alamos takes a deep breath and waits. The 2007 fire season is upon us. The Fire Management Program at Bandelier National Monument is continuing their efforts to protect the park and adjoining public and private lands from the potential negative effects of large wildfires.

Regular cool burning fires help promote diversity in local plant life. NPS Photo

In many vegetation communities within Bandelier and the surrounding areas, more than 100 years of fire suppression have resulted in a dangerous build-up of burnable vegetation and other fuels. Managers at Bandelier are using a combination of mechanical thinning, fire use, and prescribed fire to restore a sustainable forest structure. A sustainable forest in the Jemez Mountains is one with scattered, old, and large trees, a low density of midstory trees, low levels of forest floor debris, and abundant forbs and grasses in the understory. This is similar to how ponderosa pine and some mixed conifer forests looked over a century ago, when low intensity fires were frequent and widespread throughout the Jemez Mountains. By returning a sustainable forest structure, the threat of large wildland fires can be greatly reduced.

Bandelier's Fire Ecology Program is responsible for monitoring the effects of mechanical thinning and prescribed burning on the Monument's vegetation. Data collected is used to evaluate if management objectives are being met and to determine if additional research is needed. If unfavorable trends are identified, the Fire Management Program is re-evaluated and the objectives may be revised. This method of monitoring and evaluation is part of the adaptive management process. Adaptive management is a type of resource management that requires making decisions as part of an ongoing process. The results of actions are closely monitored and information collected may indicate the need to change a course of action. Scientific findings as well as the changing needs of our society may also prompt a change in the actions undertaken. This concept is the foundation of Bandelier's Fire Management Program.

For more information about the Bandelier Fire Management program go to www.nps.gov/band or call (505) 662-7065.

The Natural Role of Fire

A Landscape for Fire

For thousands of years, lightning-caused (or natural) fires have shaped and maintained the vegetation communities and natural landscapes of the Jemez Mountains. This frequent and widespread fire activity was primarily due to climatic conditions, a high concentration of lightning strikes, availability of surface fuels and flammable vegetation, and topography.

Warm and Arid Environment

The warm and arid southwestern environment contributes to the frequent occurrence of fire in the Jemez Mountains.

Surface Fuels

New Mexico has the second highest incidence of lightning strikes in the United States.

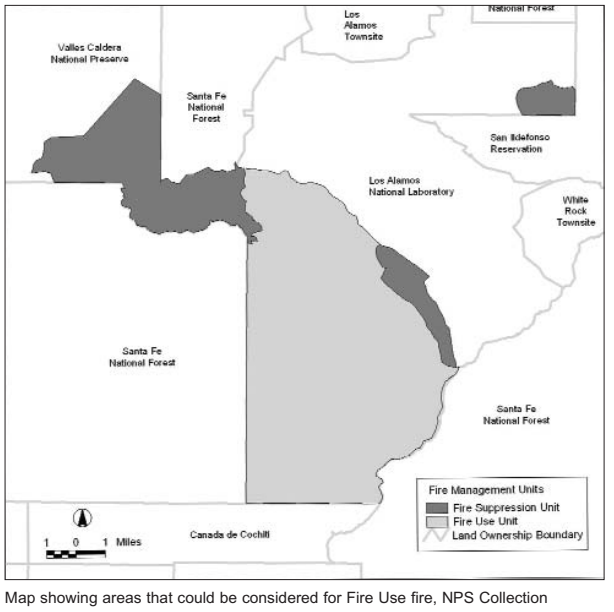
Steep Canyons

Herbaceous vegetation, woody fuels, and sufficient litter layers contribute to the opportunity for fire to ignite and spread.

The landscape includes many steep canyons, which can increase the rate of fire spread, and southerly exposures, where burnable fuels can be drier.

Human Influence

In the early 1900's, fire was seen as only an enemy, a destructive force. As a result, active and effective fire suppression efforts virtually removed this natural disturbance process from the Jemez Mountains, where fire was once frequent and extensive. With few fires to thin young trees and shrubs and remove forest floor debris (pine needles, branches, cones, bark), the open and grassy mesas with widely scattered groupings of trees began to change. The forests and woodlands became more dense. Competition between trees and forbs (non-woody plants) and grasses for survival resources (such as light, nutrients, and water) increased and resulted in a decrease in forbs and grasses in the understory. Forest canopies began to close. Forest floor debris and litter layers began to accumulate. In this changed forest structure, trees can become unhealthy, susceptible to disease, and less fire resistant. When fires do occur in this environment, they tend to burn hotter and grow larger, putting both the natural landscape and private property in jeopardy.



Map showing areas that could be considered for Fire Use fire, NPS Collection

Returning To A Natural Balance

To restore and maintain natural and sustainable forests, Bandelier must allow fire to play its natural role in the ecosystem. A lightning-ignited fire that is allowed to safely burn within a predefined area, under specific weather conditions, and to accomplish resource objectives is called a **FIRE USE** fire. Fire use fires allow managers to accomplish resource objectives, while minimizing costs because fewer people and materials may be needed as compared to a suppression fire. A suppression fire is one where the only goal is to put the fire out as soon as possible.

At Bandelier, each fire that is being considered for fire use is evaluated on its potential risk to life and property, potential impacts on natural and cultural resources, and possible damage that could occur to structures on public or private land. The availability of personnel and resources for managing the fire as well as the risk the fire could escape preset boundaries must also be taken into careful consideration. At this time, there are over 24,000 acres within Bandelier that have been identified as suitable for fire use. Should a naturally-ignited fire start in one of these areas, the process to determine whether it should be allowed to burn as a fire use fire would immediately be implemented.

Alamo Springs Fire Use fire in September 2006, NPS Photo

In 2006, two fire use fires were allowed to burn in Bandelier. Both occurred in September, after a relatively wet monsoon season. Fuel moistures were high and risk of uncontrollable growth was low, allowing firefighters to monitor the fires but not suppress them. Both fires were extinguished naturally by rain, snow, or by running out of burnable fuel in naturally sparse vegetation.

Bandelier Conducts First Prescribed Fire Since 2000

After the Cerro Grande fire in May, 2000 plans for any prescribed fires in Bandelier were put on hold. Seven years later the threat of severe wildfire has been reduced by agency actions such as thinning and pile burning. However, any plans to further mitigate the danger of catastrophic wildfire, must also include **prescribed fire**.

Bandelier has worked very closely with their agency partners in getting the park's prescribed fire program back on line. Bandelier's partners in this effort include the Santa Fe National Forest, Bureau of Land Management, U.S. Fish and Wildlife Service, Bureau of Indian Affairs, and the State of New Mexico. These agencies along with the Interagency Wildfire Management Team serve to identify, discuss, and coordinate issues pertaining to wildfire mitigation and management in the Los Alamos area. The cooperation of these agencies is vital to the successful operation of all their fire programs, including Bandelier's.

On Thursday, November 9, 2006 a prescribed burn of a 563 acre parcel near the park entrance was ignited. Park managers were optimistic that this prescribed burn could enhance efforts to reduce the threat of catastrophic fire in the area. Interagency firefighters, fire managers, fire engines, and associated support from throughout the local area were called in to assist with the burn. Once resources were in place, firefighters began the project with a test fire within the burn unit to observe fire behavior. The test fire was not very successful, as the sparse fuels would not carry the fire. Based on information supplied by a spot weather forecast, crews waited for the humidity to drop and the winds to pick up slightly. Unfortunately, even when these predicted weather conditions were present, the fuels would still not carry the fire enough to meet the prescribed fire plan's objectives. Only 60 acres were burned and the results were mixed. In many areas the fire did not burn enough of the heavy fuels on the ground. Fire managers decided the prescribed burn must be postponed to a later date when, hopefully, conditions would allow fire objectives to be met.

Although the November prescribed fire did burn 60 acres, the results were mixed. NPS Photo

Although this first prescribed fire in the monument since 2000 did not meet all the desired objectives, the fire was still considered a success. This initial prescribed fire did eliminate many small fuels and some larger downed fuels within the burn area. It also provided a valuable first step that allowed Bandelier's fire management team to renew relationships with other agencies and to assist in proactive efforts to use prescribed fire as an important management tool. In the future, good resource management planning will help perpetuate the resource values for which the monument was established while ensuring Bandelier's role as a good neighbor, keeping the landscape natural but safe for wildlife, and also those who live in nearby communities.

Bandelier's first prescribed fire since 2000 was near the park entrance, NPS Photo

This drawing by Joshua Ramsey received honorable mention in our kid's drawing contest.

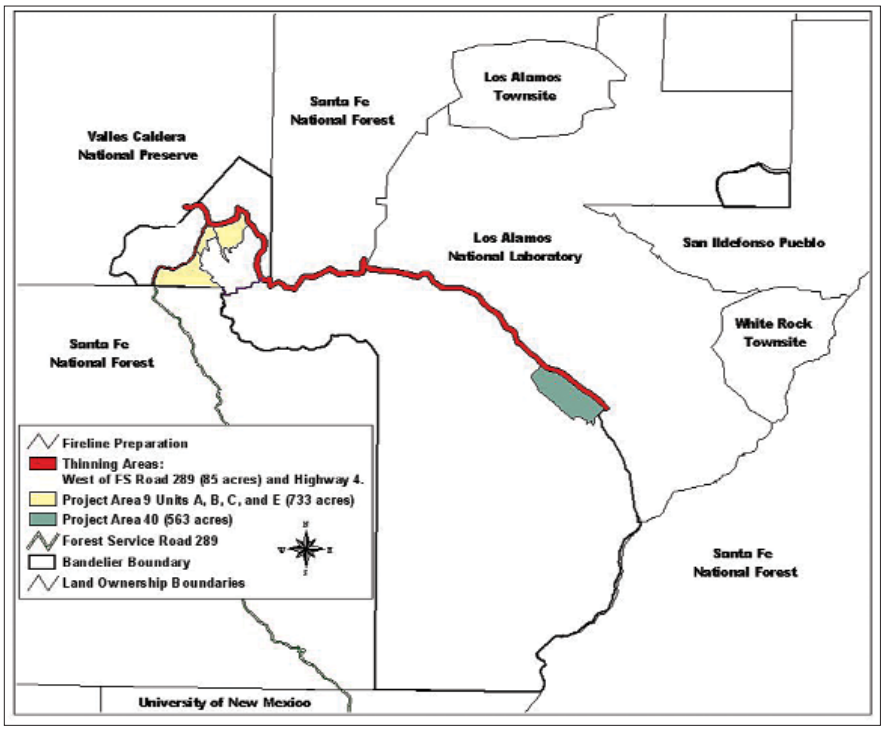
Emergency Alert Radio Station

Los Alamos Emergency Management Radio is on the air! Los Alamos county's new emergency alert advisory radio station broadcasts 24/7 on AM 1610, WQFJ 525. This system was purchased with a grant from Homeland Security. It went on the air in November 2006, playing a recorded loop of the National Weather Service, in addition to local public service announcements.

The signal is audible in most of Los Alamos, White Rock, and much of Los Alamos National Laboratory. Using a low-power AM signal, the signal is subject to radio propagation. That means you can hear it better during the day than at night, especially during cold weather. This broadcast is totally non-commercial and is a tool by which important information can be disseminated to the local community. That important information can include: alerts and notifications, evacuation procedures, emergency sheltering locations, prescribed burn information, winter storm warnings, road closures, and widespread outrages of either telephone or electric services.

When there are no emergency activities in progress, this station will broadcast public service announcements that may include: emergency preparedness tips, health information, public school announcements, and library announcements.

Review of 2006 and 2007 Fire and Fuels Management Plans



A map of proposed fire management activities within Bandelier National Monument. NPS Collection

Project	Status
Mechanical thinning on the west side of Forest Service Road 289, 85 acres.	Project was completed in August of 2006. Materials that were piled as a result of thinning will be burned in the spring or fall of 2007.
Maintenance of the previously thinned road corridor on the south side of Highway 4 and around Bandelier Headquarters.	Highway 4 was completed in September, 2006. The project around Headquarters will be on-going through the spring and summer of 2007.
Prescribed fire on 733 acres in Upper Frijoles Project Area 9.	Wet weather and high elevations made fuels in this area too wet to be burned in Fall 2006. With continued monitoring this project will hopefully be accomplished in the late summer/fall of 2007.
563 acre prescribed burn in Project Area 40 near the mesa housing, amphitheater, and Juniper Campground.	67 acres of this project were burned in November, 2006 with the help of the USFS, BIA, LAFD, and other NPS units. Fuel and weather conditions were not favorable so the burn was cancelled after one day. The remainder of the unit may be burned as soon as spring, 2007.

Thinning project along the Dome Road (FS289), NPS Photo

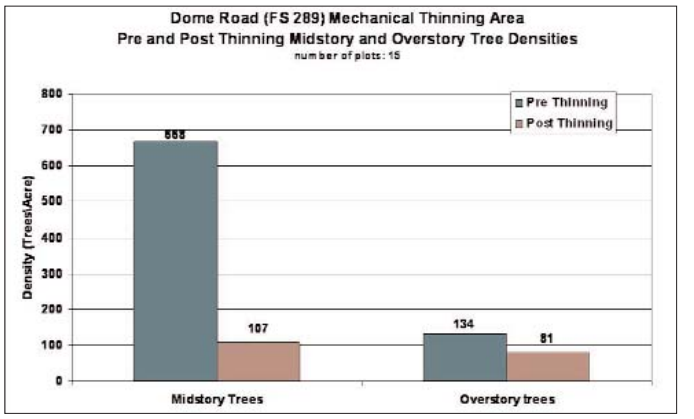
Local Area Fire Information

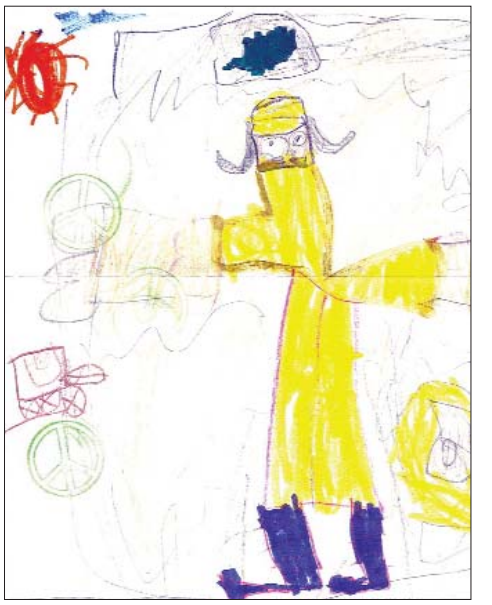
To report a fire call 911
Remember the following when you have questions about wildfire, prescribed fires, or fire restrictions:
-Bandelier National Monument, fire management office (505)662-7065 x 28 or e-mail at band_fire@nps.gov.
-Santa Fe National Forest call 1-877-FIRE(3473).
-For more fire information go to www.nmfireinfo.com.

Monitoring Results from Forest Service Road 289 Thinning Project

Results from 15 plots located along Forest Service Road 289 (Dome Road) in one of Bandelier's thinning areas show that mid-story tree densities were reduced from pre-thinning levels of 668 trees/acre to 107 trees/acre. These smaller diameter (<6") mid-story trees or "ladder fuels" are considered a fire hazard at higher densities because they provide a pathway or ladder for fire to spread from the forest floor to the canopy of over-story trees. To maintain ecological integrity and visual aesthetics, sixty percent of the larger diameter overstory trees in the thinning area were retained.

Thinning projects such as this can create effective fuel breaks and limit the potential for extreme fire behavior, making everyone who lives in or near the forest safer from destructive fires. They also provide a buffer or area from which firefighters can work to stop fire growth during wildfires, making this job safer for those who must fight wildfires when they occur.





Thanks to Matthew Mesibov for this wonderful sketch and to everyone who participated in our Draw a Firefighter Contest. Your participation was much appreciated.